Recycling: Options for Maine

State Planning Office
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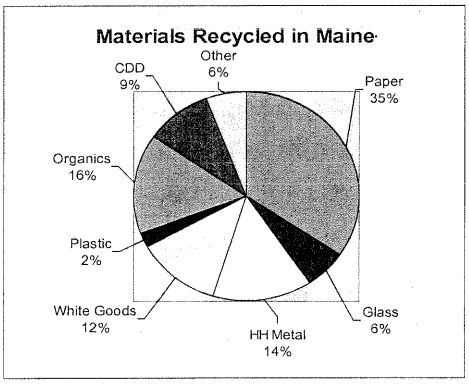
Recycling: Options for Maine

- Where We Are Today
- Getting to 50%: Options and Alternatives
- Policy Questions



Recycled materials as a % of total recycled, 2008

Sources of MSW

- Commercial:
  - Waste Generated: 1,084,100 tons, 54%
    Waste Recycled: 517,255 tons, 48%
- Residential:
  - Waste Generated: 923,493 tons, 46%
  - Waste Recycled: 201,358 tons, 22%

(Based on 2007 numbers)

Recycling Today

- 98% of the state's population has access to public recycling programs.
- 60% (280 towns) of Maine communities have reached a 35% recycling rate or better.
- Over 22% (102 towns) have reached a 50% rate or better.

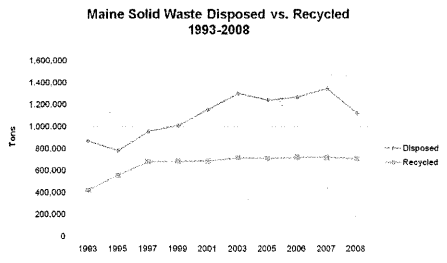
Recycling Today

- 320 jurisdictions offer some level of public recycling
- Over 90 jurisdictions have set up leaf and yard waste composting sites.
- Markets for recycled materials are mature and robust
- Recycling is driven by continuously changing market conditions

Recycling Today:

- Municipalities are responsible for MSW
- State provides technical assistance, consulting, and statewide promotional campaigns
- $12m in state matching grants, 1990-2003, built current recycling infrastructure
- Recycling has "plateaued" over the past 10 years

Recycling Trend



Current Policy:

- Existing Disposal Bans and Recycling Programs:
  - Products containing mercury
  - Electronic waste (computer monitors, cathode ray tubes, cell phones)
  - White goods, whole tires and car batteries
  - Office paper and cardboard in businesses with >15 employees

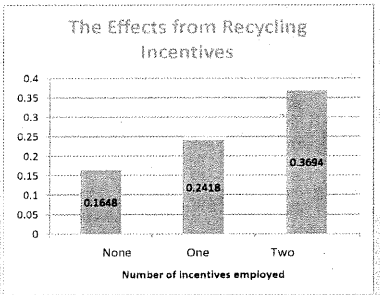
Current Policy

- Household Hazardous Waste (HHW)
  - Two permanent toxic waste collection sites (Lewiston and Portland)
  - 140 towns held HHW collection days in 2008
  - Much more hazardous waste could be collected…we estimate only 5% is captured now

Existing Incentives

1. Curbside pickup of recyclables: 233 towns
2. Pay Per Bag: 117 towns
3. Mandatory recycling ordinances: 110
4. Single stream recycling: 2 facilities, 42+ towns participate

Effect of Incentives



2010 data from ecomaine

Other Existing Incentives

- Bottle bill
- Historic Preservation Tax Credit
- Endangered Building Revolving Fund

Barriers to Increased Recycling

- Consumer perception of difficulty, inconvenience, inertia
- Lack of recent investment in programs and infrastructure; except for ecomaine, Lincoln county
- Towns tend to be risk averse, reluctant to make the upfront investment

Barriers to Recycling (cont.)

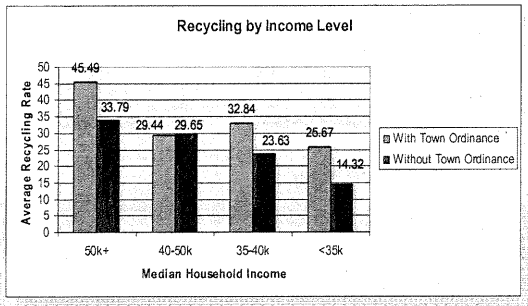
- Some towns accept only a few categories of recyclables
- Economies of scale are needed to be cost effective
- Commercial recycling depends on the market - ---little outreach or enforcement
- Sustained public education campaign needed

Recycling Demographics

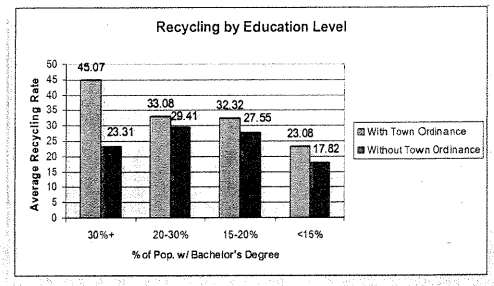
- Four most important demographic factors*:
  - Town Ordinances
  - Number of materials accepted
  - Income
  - Education level

**From SPO demographic study, 2008*

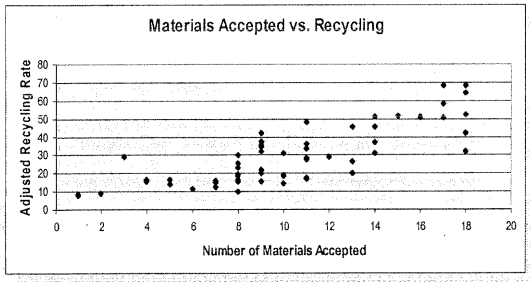
Income and Recycling



Education and Recycling



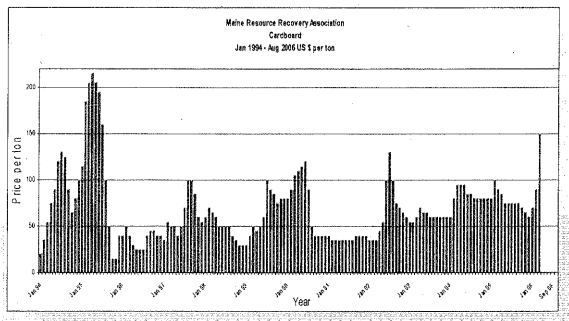
Materials Accepted



Markets for Recycled Materials

- Most markets are mature, cyclical
- Most recycled materials are trucked out of state—plastic, glass, metals, etc.
- Markets follow the economy generally, prices dipped in 2008, coming back strongly now
- Pricing is based on supply and demand, quality of material
- Some CDD and almost all newsprint is recycled in-state (Katahdin and Huhtamaki)

Cyclical Prices: Cardboard



Market Prices (MRRA – 6/9/10)

OCC baled	$116
Newsprint baled #8	$86
Mixed paper baled	$15-46
White office paper	$281
HDPE plastic mixed	$596
Plastics #3-7	$6

Market Prices

Clear Clean Glass	$0-$6
Steel Cans	$196
Light Iron	$106
Aluminum	$876
Single Stream Material	Spot market price $0

2010 Prices, net of transportation and broker fees.

Getting to 50%

- Need to recycle an additional 300,000 tons
- We recycled 709,624 tons in 2008, so this is equivalent to recycling 40% more material than we do now

Opportunities

Waste	Generated*	Recovered	%
Metal	143,415	86,936	61%
Glass	92,695	49,520	53.4%
Paper	571,910	286,164	50%
Cardbd	230,000	103,692	45%
Yard	223,867	29,948	13.3%
Textile	132,920	9498	7.1%
Plastic	211,624	15,181	7%
Food	218,620	214	<1%

** Waste generated in Tons*

Analysis of Specific Measures

Cardboard

- Recommendation: ***Recycle all commercial and residential cardboard via disposal ban or recycling mandate***

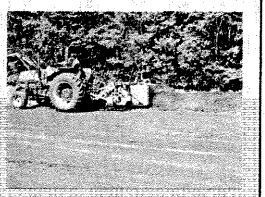
- Amount generated: 230,000 tons
- 2/3 generated by business, most of this from retail
- Amount recycled now:103,692 tons
- Additional potential @ 90% capture: 114,000 tons

Cardboard

- Cost: Minimal, since storage and baling facilities exist now
- Grants could assist in building new storage sheds and equipment purchase
- Benefits: Would raise recycling ratio by 5-7%, from 38.7% to 43.7%, plus avoided disposal costs.

Leaf and Yard Waste

- **Recommendation:** ***Compost all leaf and yard waste via disposal ban or recycling mandate***



- Amount generated: 223,867
- Amount recovered: 29,948
- Potential @
- 90% capture: 174,527 Tons

Leaf and Yard Waste

- Current strategy: intensive education campaign, ongoing workshops
- Cost: Minimal, can be done on almost any scale, disposal cost avoided
- Some towns give away compost, others charge $30-$80/ton

Glass, Plastic, Paper, Metal

- **Recommendation:** ***Increase recycling by 10% through incentives: curb, pay per bag, local ordinance or mandate***
- Cost: Minimal, offset by pay per bag fees, recycling revenues, and avoidance of disposal costs.
- Need about 100 towns to initiate new incentives
- Challenge: Not all municipalities want to implement these measures
- Benefit: Recycling increases by 79,000 tons

Food Waste

- **Recommendation:** ***Initiate a pilot project to compost food waste in one major service center***
- Cost: Expensive. $2.8-$5m per city for equipment and site improvements
- Benefits: Avoids disposal, creates reusable compost product
- Pilot project being worked on jointly between SPO, DEP, Ag

Commercial Recycling

- **Recommendation: *Increase outreach to businesses, increase commercial recycling by 10%***
- Need additional outreach to: perform waste audits, consult on cost/benefits of various measures
- Should be a joint state, local and regional effort
- PR Campaign needed to reinforce
- If commercial recycling increased by 10%; 108,410 additional tons would be recycled

In State CDD:

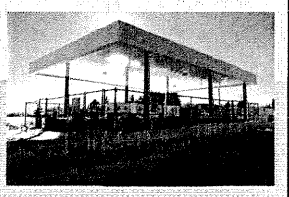
- Generated: 317,490 tons
- Currently Recovered: 25,600 tons, 8%
- 5 Commercial CDD processing plants in southern Maine
- 24 smaller CDD landfills statewide
- 3 mobile wood grinders now in operation
- Price incentives for separation in some towns

In State CDD

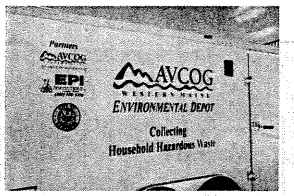
- Barriers to recycling:
  - Material is dispersed over a large geographic area
  - Separation at source adds cost, complexity
  - Processing available primarily in Southern Maine
  - Transport to processing facilities costly
  - Low landfill fees are a disincentive

Household Hazardous Waste

- **Recommendation: *Build 14 new hazardous waste collection sites***
- Two regional collection sites now, one in Lewiston, one in Portland
- 140 towns have held collection events
- Only 5% of HHW is collected at collection events
- Cost to do this:=
- 14 sites x $200k = $2.8m



Why Collect HHW?



- Alternative to illegal or improper disposal
- Reduces danger to residents, children, pets
- Reduces danger to workers that collect, transport, process, or dispose MSW
- Reduces toxicity of MSW going to disposal facilities
- **Citizens demand that this service be accessible and convenient**

Measure	Added Recycled Tons	Approx Cost
Cardboard	**+114,000**	**$1m matching grants**
Leaf and Yard	**+174,527**	**$1m matching grants**
Local Incentives	**+78, 964**	**$4m matching grants**
Commercial	**+108,410**	**$200,000 to fund additional staff or grants**
Hazardous	**xxx**	**$2.8m matching grants**
Food	**xxx**	**$2.8m for pilot project**
CDD	**xxx**	**$xx**
Total:	**+475,901 tons (recycling rate +65%)**	**$11.8m**

Summary of Options

- Recycling can be re-energized now with a revitalized public education campaign
- Targeted state matching grants for infrastructure, with municipalities providing match, would result in additional recycling.
- Additional HHW collection sites would result in capturing and proper disposal of significantly more toxic waste.
- Additional attention to commercial recycling can raise tons recycled by business.
- A combination of new incentives and disposal bans can take us to 50% recycling or beyond.
- Various funding options exist, including disposal fees, bonds, etc.

Beyond 50%

- Zero Waste Culture:
  - Move from waste to resources
  - Emphasis on waste prevention, resource recovery and personal responsibility
  - Educate, educate, educate!
  - Disposal bans on all marketable materials
  - Recycling standards for all materials delivered to disposal facilities
  - Life cycle analysis that includes collection, transportation efficiencies
- Product Stewardship:
  - Responsibility for waste shifts to manufacturers
  - Large jurisdictions work together to implement sales bans, producer recycling, sustainable purchasing, and elimination of toxic materials in products
- Waste Diversion Goal
  - **Measures what is diverted from disposal and supports the hierarchy**
  - **Beginning in some places now**

Policy Questions

- How can we better support the hierarchy through incentives and regulation?
- Where should we focus? on increasing recycling volume or reducing toxicity?
- Do we want to create new municipal incentives for investing in recycling? If so, how should those incentives be funded?

Policy Questions

- Do we want to mandate recycling of certain wastes, such as cardboard, yard waste, food waste, CDD?
- Do we want to create disincentives or penalties for disposal of certain recyclables?
- Do we want to incentivize, support or enforce recycling of commercial and business waste?

The End